

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) A system ~~for ensuring written data integrity in a data storage device operating outside of predefined normal operating conditions~~ comprising:
an environmental stress monitoring module operable to identify data storage device operation in ~~an~~ a non-temperature range environmental stress condition; and
a write integrity check module for verifying written data integrity during data storage device operation in ~~the~~ said environmental stress condition.
2. (Currently amended) The system according to claim 1 wherein the non-temperature range environmental stress condition comprises a selected one of an atmospheric pressure, a vibration level, or an error correction code (ECC) rate. ~~monitoring module as a temperature detector that senses device operational temperature~~ and identifies a stress condition as an operational temperature outside a predetermined range of temperatures.
3. (Currently amended) The system according to claim 1 wherein the write integrity check module invokes a software routine verifying each write operation following identification of ~~an~~ the environmental stress condition by reading back each data written to the data storage device and comparing the read back data with the data written.

4. (Currently amended) The system according to claim 3 1 wherein the non-temperature range environmental stress condition comprises an amplitude of a data readback signal transduced by a data transducer. ~~monitoring module has a temperature detector that senses device operational temperature and identifies a stress condition as an operational temperature outside a predetermined range of temperatures.~~

5. (Currently amended) A method ~~for verifying data integrity in a data storage device operating in an environmental stress condition~~ comprising:

- identifying ~~an~~ a non-temperature range environmental stress condition occurring during data storage device operation;
- verifying data written to the data storage device after the non-temperature range environmental stress condition is identified; and
- signaling a write error if the data written to the data storage device when verification of the data written is not confirmed.

6. (Currently amended) The method according to claim 5 wherein the identifying step comprises:

- monitoring a non-temperature range parameter of the device ~~device operating~~ temperature; and
- signaling a stress condition if the monitored parameter ~~operating temperature~~ is outside a predetermined range ~~of temperatures~~.

7. (Currently amended) The method according to claim 5 wherein the verifying step comprises:

writing data to a logical block address;
reading back the data written to the logical block address; and
comparing the data read back with the written data.

8. (Original) The method according to claim 7 further comprising:
determining a spare location for the written data if the data read back is not identical
to the written data;
writing the written data to the spare location;
reading back the data written to the spare location; and
comparing the data read back from the spare location to the data written to the spare
location.

9. (Currently amended) The method of according to claim 8 further comprising:
indicating a write error if the data read back from the spare location is not identical
to the data written to the spare location.

10. (New) The method according to claim 6 wherein the non-temperature range
parameter of the monitoring step comprises an atmospheric pressure of the device.

11. (New) The method according to claim 6 wherein the non-temperature range
parameter of the monitoring step comprises a vibration level sensed by the device.

12. (New) The method according to claim 6 wherein the non-temperature range parameter of the monitoring step comprises an error correction code (ECC) rate of data transduced by the device.

13. (New) The method according to claim 6 wherein the non-temperature range parameter of the monitoring step comprises an amplitude of a data readback signal transduced by the device.

14. (New) The method according to claim 6 wherein the non-temperature range parameter of the monitoring step is further preserved for potential failure analysis in the event that a device failure occurs.

15. (New) An apparatus comprising:
a data transducer configured to transfer data with a data storage medium;
an environmental stress monitoring module configured to identify a non-temperature range environmental stress condition; and
a data integrity check module which verifies data integrity after a data transfer operation of the data transducer in relation to identification of the non-temperature range environmental stress condition by the environmental stress monitoring module.

16. (New) The apparatus according to claim 15 wherein the non-temperature range environmental stress condition comprises a selected one of an atmospheric pressure, a vibration level, or an error correction code (ECC) rate.

17. (New) The apparatus according to claim 15 wherein the non-temperature range environmental stress condition comprises an amplitude of a data readback signal transduced by the data transducer.

18. (New) The apparatus according to claim 15 wherein the environmental stress monitoring module further preserves the non-temperature range parameter for potential failure analysis in the event that an apparatus failure occurs.